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THE OSWEGO NORMAL AND TRAINING SCHOOL.

REALIZING the importance of the first few years of study, and believing that they might be made of greater benefit to the majority of students by a more natural system of elementary instruction, Mr Sheldon, of Oswego, determined to effect a radical change in methods of teaching, in the primary schools under his care. In the spring of 1861, the Oswego Board of Education secured, at his recommendation, the services of Miss Margaret E. M. Jones, who, for many years, had been connected with the Home and Colonial Training School of London, in which she had special charge of the Methods of Elementary Instruction. Under her direction a school was organized, having for its object the training of teachers for the primary schools of Oswego. This was strictly a *training* school, its scope including no instruction in the branches of study pursued in Normal Schools, but limited to the theoretical discussion of methods of teaching and the practical application of those methods in primary schools organized for that purpose.

In the spring of 1862, graduates of this school were established in charge of the primary schools of Oswego. At the end of the year pupils of these schools would be ready for transfer to the intermediate, and it was resolved to extend the training of teachers to the subjects embraced in that department. This was done under the direction of Professor Herman Krusi, who had long been connected with the Intermediate Department of the Training School of London.

The enterprise had thus far been entirely a local one, undertaken to supply a local need and supported by the citizens of Oswego alone. But the popularity of the methods adopted attracted so many pupils from other parts of the country—many of whom were teachers of experience and established reputation—that the Board of Education determined to place the school on a more extended basis, and in a position of greater usefulness than was at first proposed—to place it, in short, under the patronage of the Educational Department of the State. The attempt was made, and was partially successful. In the winter of 1863 the Legislature made an appropriation of \$3,000 a year for two years, to aid in the support of the Training School, pending the demonstration of its usefulness

and the practicability of its methods. In 1865 it was incorporated as the Oswego Normal and Training School, and its annual appropriation was increased to \$6,000—on condition that the Board of Education, or citizens of Oswego, should provide a suitable building for the accommodation of the school. This condition was accepted, and complied with by the purchase of a large and commodious edifice, with ample grounds. Our frontispiece presents a view of the building in perspective. Its entire length is 153 feet, its depth 130 feet. It contains full accommodations for six hundred children in the Model and Practicing Schools, and from two hundred and sixty to three hundred pupils in the Normal Department.

The school entered upon a new term on the 28th day of February, with a course of instruction embracing all that is usually taught in Normal Schools, in addition to a thorough course of instruction and training in methods of teaching.

The design of this school is to prepare teachers for their work, and to elevate the standard of teaching by familiarizing its pupils with correct philosophical principles of education and the proper mode of applying them. With this view, much time is devoted to the study of *principles* and *methods*, and to their practical application.

THE CASES OF SUBSTANTIVES IN ENGLISH.

AMONG the many disputed points in English grammar, there are few that are more unsettled in our school grammars than the subject of the cases of substantives. The children in some of our schools are taught that there are three cases, Nominative, Possessive, and Objective; in others, that there is an additional case the Independent; while some instructors are in favor of stretching the English noun on the rack of Latin declension. The definitions of case, vary also between the two extremes of making it to be a changed form of a word, on the one hand, and on the other hand to be a changed idea in a word.

Now much of this confusion comes from hasty and empirical generalization. In grammar we have certain facts given us, about which there is rarely any dispute. These facts we must classify; and the best grammarian is the one who classifies the facts in the simplest and most truthful manner. A language is made by the usage of a race; but that usage is almost sure to follow certain natural laws, and it is the business of the grammarian to discover these laws.

What is case? The etymology would seem to show that it means a change in form merely. This change does not necessarily take place at the end of a word, for the Celtic languages decline nouns by changing the

initial letter. But this change of form is effected for a purpose ; and that purpose is to indicate, not gender or number or person, but the relation to other words in the sentence. So we may define case to be a change of form in the substantive to mark its relations to other words in the sentence.

Not every kind of relation has a form appropriated to it in any language. This would be well-nigh impossible. The civilized language most copious in cases, the Sanscrit, has only eight—the six cases of Latin, with the Locative and Instrumental. To express the nicer shades of relation, prepositions are indispensable ; but a preposition, with a substantive, does not make a new case.

Now it is evident that in modern English we have three distinct case-forms for pronouns, and only two for nouns. The objective case in nouns is a mere convenience for parsing, and may, perhaps, have some just cause for existing, in the wish to preserve the analogy between nouns and pronouns.

The spirit of the English language is opposed to change in the form of words for the sake of varying their relations. The true English declension and conjugation is by means of auxiliary words, and the few changes in the body of the inflected word are exceptions, or, more properly speaking, relics of the old inflection. The Teutonic languages have all of them fewer inflections than the rest of the Aryan family ; and of the Teutonic tongues, the Anglo-Saxon had among the least. And nearly all these inflections were lost in the interval between the Norman conquest and the revival of English as a literary language, or soon after. The Anglo-Saxon had four cases—Nominative, Genitive, Dative, and Accusative ; and besides these, had some fragments of an Ablative preserved from an older state of the language. Of the terminations used to mark these cases, we have left in modern English the following relics.

1. The Genitive of the first declension singular becomes the modern Possessive in *s* or *es*. This *s* is the more usual sign of the Genitive in the Aryan languages, and is undoubtedly the true original Genitive sign. This *s* has so much power that it has passed over to the Possessive plural also, where no *s* was used by the Anglo-Saxons. This change took place just before the time of Chaucer. The apostrophe used in modern spelling is a relic of the error of the sixteenth century in considering the *s* a contraction of *his*.

2. Of the regular Dative plural in *m*, we have two specimens left in the adverbs *whilom* and *seldom*. The adverbs of place *there* and *where* are the Dative feminine singular of the article and the interrogative. The modern Objectives, *him*, *her*, *them* and *whom*, are in Anglo-Saxon regular Datives.

3. Of the regular Accusative singular we have *twain* from the old Accusative of the numeral *two*. The adverbs *than* and *then* are from the Accusative of the article, and *when* from the Accusative of the interrog-

ative. *Me* and *us* are derived from another root than their nominatives, and are the same in Anglo-Saxon as in English.

4. Besides these, we have still two specimens of the very old Ablative; *why*, from the Ablative of the interrogative; and *the* (from *thy*) in such expressions as "all the more," and "the more the better," where *the* is a proper Ablative of instrument.

These are all the case terminations we have in modern English, and most of these, it will be seen, could not now be recognized as cases. The Possessive case is so manifest a convenience in place of using the more formal objective with the preposition *of*, that it will probably exist as long as the English language. The close union of the governing noun, with its Possessive, is quite analogous to the "construct state," its equivalent in the Semitic languages. The other cases our language can well dispense with. Their place is well supplied by prepositions and by the position of the substantive in the sentence, while their removal has rendered the language much simpler and easier to learn.

RECENT DISCOVERIES IN IRON.

THE popular opinion, that the various kinds of cast-iron and steel owe their diverse properties chiefly to their containing different proportions of combined carbon, has long been doubted. Chemical analyses have shown that combinations of iron and carbon do not always possess properties according to theory. Specimens of cast-iron and steel, widely different in quality, are found to contain exactly the same proportion of carbon; and the same is true of wrought-iron and steel. The consideration of these well-known facts led M. de Cizancourt, a distinguished iron manufacturer, to enter upon a course of investigation, which has resulted in the complete overthrow of the carbon theory. Berzelius first ascertained that the remarkable difference between the salts of the protoxide and those of the peroxide of iron is owing to their containing not merely different proportions of the same metallic base as is generally supposed, but different bases—that there are, in fact, two kinds of iron-metal, which, except that they may be converted into each other, are as unlike as can be.

He called the base of the protosalts *ferrosus*, that of the persalts *ferricum*. So great is the difference between the compounds of these two allotropic states of iron, that an eminent chemist, Dr. Odling, has said that had we been unacquainted with the methods of converting them into each other, we should never have suspected them to contain the same metal, or even a similar metal. They differ from each other more than the salts of *ferrosus* differ from the salts of copper or nickel, and more than the salts of *ferricum* from those of aluminum or bismuth. M. de Cizancourt

court finds that ferrosium and ferricum are as distinct in metallurgy as in chemistry, and claims that the "dominant characteristics" of manufactured iron depend entirely upon how far it consists of the one form of iron, and how far of the other; and this depends chiefly upon the degree of oxidation of the ore from which the iron is derived.

Ferrosium is hard and brittle, and when combined with carbon constitutes the variety of iron known as *white cast-iron*. It is reducible at a much lower temperature than ferricum, has a stronger affinity for carbon, and may be converted into ferricum much more readily than ferricum into ferrosium. In metallurgical operations on a great scale, the latter transformation seldom occurs.

Malleable iron is nearly pure ferricum, the distinguishing characteristics of which are malleableness and tenacity. It may be derived directly from an ore of ferricum; or it may be derived from an ore of ferrosium, the metal being transformed during the processes of manufacture; or when the ore, like the magnetic oxide, contains both of the two states of iron, it may consist of a mixture in any proportion of what may be called natural ferricum and artificial ferricum. M. de Cizancourt attributes the different varieties of wrought-iron to such diversity of composition.

The soft and somewhat tough *gray cast-iron* is also ferricum. *Mottled cast-iron* is a compound of ferrosium and ferricum. The graphite, which is diffused through these two kinds of cast-iron, and which remains unchanged after the iron is dissolved by dilute sulphuric acid, is carbon given up by the ferricum while cooling. Steel is also a mixture of ferrosium and ferricum, combining the fusibility of the first with the malleability and ductility of the last—the best and most stable kind being that which contains the two states of iron in atomic proportions.

A good steel may consequently be made directly from the ore known as magnetic oxide; or by fusing together proper proportions of white cast-iron, which is a carbide of ferrosium, and soft iron, which is nearly pure ferricum.

THE SOURCE OF THE NILE STILL UNFOUND.—Captain Speke, who has been enjoying the glory of having discovered the long-hidden fountains of this wonderful river, is in danger of losing his laurels. Mr. Baker has been making explorations, and the conclusions of the two do not agree. The sum of the whole matter seems to be that Captain Speke discovered the great lake, Victoria Nyanza, and a river issuing from it. This river, it has been ascertained, with several others, equally large, falls into another great lake, the Albert Nyanza. The outlet of this last lake may be the beginning of the Nile, but it is not yet known to be so.

NEGLECT OF APPARATUS.

THE Greek expression, "having seen, then we know," is a correct one. Nowhere is this idea more applicable, than in the school-room. Let a child see a principle demonstrated in a manner suited to his capacity, and then only can he be said to know it. This is as applicable to the more advanced pupils, as to the child under primary instruction, especially when Chemistry and Natural Philosophy are the branches taught. What pupil, however mature, can properly understand these studies without the aid of experiments and apparatus?

How can a teacher clearly prove to a class the pressure of the atmosphere, without an air-pump; or show the nature of hydrogen gas, unless he makes it, and exhibits its properties? Yet many teachers attempt, for it can be but an attempt, to teach these branches of natural science without the aid of such illustrations. The result is, either the pupil becomes disgusted with these important and interesting studies, or only burdens his memory with facts which his reason can not digest, nor his judgment make practical. This erroneous method of imparting instruction does not always arise from the want of apparatus, but often from carelessness and neglect. This neglect is to be found in schools of every grade, from the smallest district school to the largest academy.

Most country schools possess a globe, but how many of the pupils are benefited by it? Well does the writer remember when a globe was purchased for the common-school in which he was a pupil. For three years following he remained there, and three different instructors "swayed the scepter of Birch." Under the teacher's desk stood a box, locked, and report said that it contained the world in miniature, but not one of these teachers ever permitted the scholars to behold it. Outline maps had also been procured, and they were shown, perhaps, a dozen times during his attendance. It was an expense to the district to have the blackboard painted; so the teachers, fearful of displacing its present coat, never allowed the pupils to injure it with chalk. As it was in that school then, so does the writer find it to-day in many schools of a similar grade. Inspect the condition of our incorporated academies, and in many ways the same neglect is apparent. The importance of chemical and philosophical apparatus is admitted in the Empire State at least, where the regents grant each year to every incorporated institution, a sum equal to that which the trustees raise for the purchase of apparatus, which must not, however, exceed a certain prescribed amount. Instructors use this as a means of drawing patronage, by publishing, in a marked manner, the cost of their apparatus. If their valuations are true (and they are often to be doubted), they usually include the cost of every article purchased since the school was founded, whether it now has any value or utility. Examine the appa-

ratus of most of our academies, and you will not find one in five where one-half of the instruments are in working order. Some have been broken by ignoramuses acting as teachers. In some cases, the pupils have had free access to them, and destruction has been the result. In others, they have been allowed to become useless through want of attention.

An institution was opened some twelve years since in one of the southern counties of New York, and provided with a superior chemical and philosophical apparatus ; now it is impossible to find in it a single piece which is of any benefit to a class. Portions remain, but rust, the vandalism of the pupils, and the indolence of the teachers have ruined what should have been the pride of the academy. This is but an illustration of the condition of the natural science department in many of our higher schools. Should investigations be made as to the benefit derived from appropriations made by the State, and the present condition of the apparatus purchased, I believe that no more such allowances would be granted, unless the institution would guarantee to use and keep in good repair the articles provided.

The causes of this neglect of apparatus have been casually noticed, but deserve a more extensive review.

Often the teacher is ignorant both of their utility and construction ; has been educated without them, and hence regards them as useless. This refers, perhaps, more to the teachers of public schools, than to those of a higher grade.

Indolence is often the cause. To use and keep an apparatus in good order requires time and labor, and it may also soil the hands. The instructor being too lazy to clean an article after use, allows some heedless pupil to do his work, or he puts it aside never to be looked at until it is again wanted, when he finds it ruined.

Want of time may be given as another reason. In many small academies where they profess to teach every thing, one teacher is required to instruct three or four departments, and hence has not sufficient leisure to give his apparatus due attention.

Apparatus is found as it should be, only where the teacher understands the mechanism of each instrument under his control ; knows its appropriate use ; inspects its condition almost daily ; loves his field of labor, and takes pride in exhibiting his well-kept chemical and philosophical rooms.

This life is not holiness, but a becoming holy ; not health, but a becoming healthy ; not a being, but a becoming to be ; not a rest, but a labor ; we are not yet what we shall be ; all is not yet done and finished, but in progress ; this is not the end, but the way ; it glows not nor sparkles yet, but every thing is purifying.—*Luther.*

ANALYTICAL ARITHMETIC.

THERE have been many improvements in methods of teaching arithmetic, in consequence of the prominent position of the science in the curriculum of studies in our best schools ; still, I question if it is taught as efficiently as it might be, or that a proper intellectual advantage is obtained from its study. The instruction given, as a general rule, is too dogmatic. The pupil works too much according to *rules* without regard to *principles*. The reasoning faculties are not exercised by *learning by rote* a set of arbitrary rules, and then solving questions according to those rules, without any knowledge whatever of the *principles* on which the rules may be founded. And yet this is a method adopted in many schools ; and that boy who can apply most quickly the *rules* in producing results, is regarded as the most expert arithmetician.

Much of that intellectual training which is sought from the higher branches of mathematics, could be acquired from the most elementary instruction in arithmetic. Pupils rush on to the study of algebra and geometry, attracted by their high-sounding titles, and the charms which time has associated with them ; and parents too often fancy, if their children are studying algebra, geometry, etc., their progress is great and rapid. Arithmetic is consequently neglected ; and there is not that mental discipline derived from it, which it would certainly bestow if properly taught.

Before a boy advances to any extent in arithmetic, he should be well drilled in mental calculations. His mind will thus acquire a habit of rapid computation, and if judiciously taught, a deductive method will at the same time be acquired. Arithmetic, when properly taught, becomes a course of mental discipline,—in its first steps exceedingly elementary, but increasing in difficulty in a measured progression with the child's intelligence. Thus, the understanding is cultivated from the time the pupil first enters school ; and in the higher classes results are obtained, which, by any process less constant in its operation, and less systematic, would be impracticable. If the analytical method of teaching arithmetic were more common, the *practical* advantage would be much greater.

Before the pupil is familiar with this method, give him questions such as the following :

1. If 9 yards of cloth cost \$54.45, what would 7 yards cost ?

What do 9 yards cost ? \$54.45. What, then, would 1 yard cost ? One yard would cost the ninth part of the price of 9 yards, or \$6.05. What would 7 yards cost ? Seven times the price of 1 yard, or \$42.35.

This might be systematically written as follows :

$$\text{Cost of 9 yards} = \$54.45$$

$$\text{" 1 yard} = 6.05$$

$$\text{" 7 yards} = \$6.05 \times 7 = \$42.35.$$

2. If 4 men can do a piece of work in 48 days, how long will it take 24 men to do it?

The solution may be written thus :

Time for 4 men to do the work = 48 days,

" 1 man " = 4 times 48 days,

" 24 men " = $\frac{1}{24}$ of 4 times 48 days = 8 days.

If 4 men require 48 days to do the work, would 1 man require a longer or shorter time? *A longer time.* How much longer? *4 times longer, etc.*

In Compound Proportion particularly, this deductive method is both convenient and useful.

The following question offers many difficulties to a pupil in Compound Proportion, but by the method of analysis, or *First Principles*, it can be made very intelligible and instructive.

3. If 12 horses plough a field of 8 acres in 3 days, in what time will 21 horses plough a field of 100 acres?

Solution:

(a) Time in which 12 horses plough 8 acres = 3 days,

(b) " " 1 horse ploughs 8 acres = 12 times 3 days,

(c) " " 1 " 1 acre = $\frac{3 \times 12}{8}$ days,

(d) " " 21 horses plough 1 acre = $\frac{3 \times 12}{8 \times 21}$ days,

(e) " " 21 " 100 acres = $\frac{3 \times 12 \times 100}{8 \times 21} = 21.428$ days

The following are examples of the questions that may be proposed to a class with reference to the different steps, which, for convenience, are marked a, b, c, etc.

(a) What is stated in this question? *Time in which 12 horses, etc.*

(b) If 12 horses plough 8 acres in 3 days, will one horse require a longer or a shorter time? *A longer time.* How much longer? *Twelve times longer.* Then, if 12 horses plough 8 acres in 3 days, 1 horse would require 12 times 3 days.

(c) If 1 horse can plough 8 acres in 12 times 3 days, would it take a longer or shorter time to plough 1 acre? *A shorter time.* In what time, then, would 1 horse plough 1 acre? *In one-eighth of twelve times three days.* And so the different steps can be analyzed.

This method of reasoning from the given thing to a unit, and from the unit to the required thing, is useful as an early application of the deductive method which is employed in algebra. The pupil thus becomes habituated to the different steps of an argument, and his mind, while learning the practice of arithmetic, is strengthened in its reasoning powers. Questions in discount and percentage, I think, become much more intelligible by this method. As an example, take the following problem in discount.

4. What is the present worth of \$4,500, due 16 months hence, at 6 per cent. per annum?

(a) Interest on \$100 for 12 months	= \$6
" 100 for 16 months	= $\$6 \times 1\frac{1}{3} = \8
. Amount of 100 for 16 months	= \$108
(b) Present worth of \$108 for 16 months	= \$100
" " \$1 "	= $\frac{100}{108}$
" " \$4,500 "	= $\frac{100 \times 4,500}{108} = \$41.66\frac{2}{3}$

After the pupil is acquainted with vulgar and decimal fractions, this method will become quite simple, and all the questions which occur in partnership and percentage can be easily solved. I would not, however, advocate the discontinuance of some of the *rules* which are founded on very plain principles; but I would advocate more frequent exercise in this deductive method. I believe it is now given in most works on arithmetic; but it has not that distinction which it is entitled to, nor is the *style of writing out the solution* attended to properly. This, too, is a matter of importance. Neatness and systematic arrangement should always be required. Boys are prone to be slovenly, and every care should be taken to check a tendency which, if persevered in, will not be confined merely to work in arithmetic.

PRONUNCIATIONS.—The London correspondent of *The Round Table*, says, that it is a mistake to pronounce Pall Mall as if it were Pell Mell. The *a* is pronounced as it is in the word "alley," and *fal-lal* would be a rhyme to it. He says there are quite a number of English words, whose pronunciation, we, Americans, generally mistake. The name of the poet Cowper, for instance, is pronounced as Cooper. There are some things in which our pronunciation is the best—for example, nearly all their *a*'s are broad, as *harf* for half, *parst* for past. We might also well refuse to follow them in calling Greenwich Grinidge, Norwich Norridge, Finsbury Finsbry, and the like. In writing the name Disraeli, Americans always put the apostrophe after the D (D'Israeli), which is never done in England. The English generally pronounce the *e* broad in such words as clerk (clark). The famous Epsom race is called the "Darby." Earl Derby's name is variously pronounced. Americans should know, also, that the Duke of Argyll's name should not be spelt Argyle, though the latter represents the true pronunciation. Among the names of literary men occasionally mispronounced in America, are Clough (Cluff), Froude (Frood), Bagshot (Baggot), Lewes (Lose), Buchanan (Bewkannon), and Maurice (Morris)—the names in parentheses indicating the true pronunciations. Of course, we can only rely on some knowledge of continental languages to make people pronounce Mazzini *Matseeny*, Beethoven *Beethoven*, and Goethe *Gerier* or *Gertay*.

COLONIAL LAWS.

AN ancient law of Massachusetts required that "the ladies' dresses be made so long as to hide their shoe-buckles;" and, in 1630, there was an act of the General Court prohibiting short sleeves, and requiring garments to be lengthened so as to cover the arms to the wrists. Our good forefathers do not seem to have confined their efforts in the way of "dress reform" wholly to the softer sex. In 1640 the General Court of Connecticut *ordered*, that "notwithstanding the late order concerning the *excess* of apparel, yet diverse persons of several ranks are observed still to exceed therein. It is therefore *ordered*, that the constables of every town within these liberties shall observe and take notice of any particular person or persons within their several limits, and all such as they judge to exceed their condition and rank therein, they shall present and warn to appear at the court." It was further *ordered*, that all such persons as shall for the future make, weave, or buy any apparel exceeding the quality and condition of their persons and estates, or that is apparently beyond the necessary end of apparel for covering or comeliness, either of these to be judged by the Grand-jury and County Court, where such presentments are made, shall forfeit, for every such offence, ten shillings." Similar orders were made in Massachusetts, where, in 1653, we find that one Fairbanks was tried for wearing "great boots." About the same time it was *ordered*, in Connecticut, that "if any man kiss his wife, or wife kiss her husband, on the Lord's day, the party in fault shall be punished at the discretion of the Court of Magistrates." A gentleman of New Haven, after an absence of some months, reaching home on the Sabbath, and meeting his wife at his door, kissed her, and for his temerity in thus violating the law, was arraigned before the court the next day, and fined "for so palpable a breach of the law on the Lord's day." We were unable to find the law prohibiting cider from working on Sabbath, upon the penalty of flogging the barrels, though tradition says such did exist.

In the early settlement of Virginia, squirrels were so numerous that they greatly injured, and often destroyed the fields of corn, and the outside rows were usually entirely consumed. To prevent this, the General Court seriously set themselves at work, and *ordered*, that thereafter no planter should have, or plant any *outside rows* in his cornfield. It were well if Virginia Judges never made a graver mistake. In Massachusetts (1669) it was enacted by the court, that "any person or persons who shall be found smoking tobacco on the Lord's day, going to or coming from the meetings, within two miles of the meeting-house, shall pay twelve pence for every such default. The same penalty was imposed for "taking tobacco publicly in the open streets of any town." There is still a law in Boston against smoking in the streets. It is said that a lady there, not

long since, having made a pudding for dinner, put it on the front steps to cool. It was immediately taken from her *vi et armis*. A policeman took it to the station-house for "smoking in the street."

Roger Williams, after being banished from Massachusetts, removed to Providence, and became lawgiver and minister to his infant colony. He formed his constitution upon the broadest principles of civil and religious liberty and equal rights, and was the first governor in North America who held *liberty of conscience* to be the *birthright of man*. The spirit of Roger Williams, more than that of any other of the early settlers, lives to-day in our laws.

In Maryland (1699) it was enacted, that "if any person whatever, inhabiting within this province, shall blaspheme—that is, curse God, deny our Saviour to be the son of God, or deny the Holy Trinity, or the Godhead of any of the three persons, or the unity of the Godhead; or shall utter any reproachful words or language concerning the Holy Trinity, or any of the three persons thereof—he or she shall, for the first offence, *be bored through the tongue*, and fined £20 sterling."

In Massachusetts (1657) it was ordered, that if any Quaker or Quakers shall presume, after they have once suffered what the law requireth, to come into this jurisdiction, every such male Quaker shall, for the first offence, *have one of his ears cut off*, and be kept at work in the house of correction till he can be sent away at his own charge; and for the second offence, shall have *the other ear cut off*, and be kept at the house of correction, as aforesaid. And every woman Quaker that hath suffered the law here, that shall presume to come into this jurisdiction, shall be severely whipped, and kept at the house of correction at work till she be sent away at her own charge; and so also for her coming again, she shall be alike used as aforesaid. And for every Quaker, he or she, that shall a third time herein again offend, they *shall have their tongues bored through with a hot iron*, and be kept at the house of correction, close at work, till they be sent away at their own charge."

In New York (1693) it was ordered that "all Jesuits, seminary priests, missionaries, or other ecclesiastical persons, made or ordained by any power or jurisdiction derived or pretended from the Pope, residing or being within the province, depart the same on or before the first of November, 1700. If any such continue to remain, or come into the Province, after the said first of November, he shall be deemed an incendiary, a disturber of the public peace, an enemy to the true Christian religion, and shall suffer *perpetual punishment*." One that lived in those days, we imagine, could hardly suspect that before another century passed away, the people of the whole United States would declare that "Congress shall pass no law respecting an establishment of religion, or prohibiting the free exercise thereof."

JULIAN GURDON : SCHOOLMASTER.

CHAPTER V.

A CONSULTATION AND A CRISIS.—*Continued.*

JIM HOWLAND and Andrew Haight were on hand this morning. Except during reading of Scripture and prayer, they made no disturbance during the early part of the day. They "parsed" and "did sums" with the rest, and again went away at noon ; but this time they returned to the afternoon session, coming in noisily after school had begun, and conducting in a manner that convinced me that an outbreak was impending. I made no comment, thinking it better to defer, if possible, all strife until the settlement of affairs by the school-meeting. But it was only by the utmost self-control that I was able to remain quiet amidst the growing tumult.

It was quite late in the afternoon when I came to Mary Lee. Her lessons being all different from the others', she recited them alone. Now she showed me on her slate the sums, over which she had been puzzling ; recited her lessons in geography and grammar, and then, to my surprise, produced a French Reader, and requested me to assist her in the translation of a difficult passage. I explained the idiom, and showed her the verb in the lexicon, tracing it through its irregularities ; and was proceeding to commend her neatly-written exercise, when Jim Howland suddenly rose and addressed me, in an insolent tone.

"You'd better drop that, I tell you ; 'common-schools is made for English branches', father says, and if them Lawrences and Lees want French and stuff they must go to 'cademies to git it. If you teach 'em here, Mr. What's-your-name, he says he'll take the law on ye."

I knew nothing about the law upon the point, but I knew I was not to be bullied in my school by a pupil.

"Take your seat, sir !" I said.

"Not for you !" was the reply.

Quick as thought, I stood beside him. "Then leave the school !" I said, quietly, "you have no right here." He turned and clenched my arm, while Andrew Haight brandished his fist close to my face. One glance showed me Robert Lawrence by my side, and I hurled the bully toward the center of the room.

CHAPTER VI.

THE SCHOOL-MEETING.

IT was late before I arrived at the school-house, where the school-meeting was in progress. In the excitement of the occasion I had not been conscious of the severe wrenching which my arms and chest had re-

ceived in my encounter with the two young ruffians, whom, thanks to the assistance of Robert Lawrence, and the unexpected aid of James Lord, I had been able to eject from the school-house. Jim Howland, like all bullies, was a coward also, and went off, crying, toward home, as soon as the door closed behind him. But Andrew Haight remained, and a battle of fisticuffs took place in the yard, between him and James Lord, before he followed the example and footsteps of his companion.

After they had gone, a solemn hush pervaded the room. James Lord came in, bearing with all meekness his victor's laurels, and took his seat, blushing beneath the approving glances of the school. Robert Lawrence looked as if he had encountered no worse opponent than the problem in algebra, over which he was puzzling and frowning. And I, buoyed up by excitement, carried the afternoon exercises triumphantly to the end. But when I had reached home I was very glad to repose quietly in the dimness and silence of Mrs. Lawrence's spare-room till called to supper. The application of certain embrocations, and an unmeasured amount of praise and pity from Mrs. Lawrence and her daughter, detained me from the meeting until long after the deacon had wended his way thither.

I entered the meeting shyly, expecting to be received with marks of enmity. Instead, the meed of a conqueror awaited me.

An awkward cheer greeted my entrance, and a number of hard, brown hands were extended. Instead of being allowed to sit down in the corner toward which I turned, I was thrust into a conspicuous place beside the chairman, while my friend, the deacon, was on the other side, and just before me Robert was officiating as secretary of the meeting.

I had scarcely taken my seat before the deacon was upon his feet, moving a vote of thanks to me for the efficient manner in which I had cleared the school of the two ruffianly intruders. And when the vote had been pronounced unanimous, and I rose to reply, he begged me to tell "the deestric" what I had said to him in relation to books and apparatus. Glad to turn the discussion, I said a few earnest words, assuring the people of my desire to do all in my power for the improvement of my pupils, and that for this end alone did I make any demands upon them. I gave my reasons for desiring a change of books; and explained how the school might be benefited by the charts I had sent for, a blackboard, and such uncomplicated apparatus as might easily be prepared. My plea was successful; all I asked was granted with scarcely a dissenting voice.

After adjournment, there was a general gathering round me, and several introductions took place. Among others the deacon named to me Mr. Lee, who had been chairman of the meeting. He bowed with town-bred grace, but did not extend his hand. There was something constrained in his manner, I thought, but his tone was courteous, and his words apologetic as he alluded to the altercation that afternoon.

"Mary is anxious to get on with her French, and I was pleased to think

that we were likely to secure a teacher for the winter who could give her the instruction she needs. But I find the laws of this State limit the curriculum of our common-schools to English studies. Deacon Lawrence informs me that you have engaged to employ your leisure in the tuition of his son Robert, or I should have proposed a similar arrangement for Mary's benefit."

"I should be glad to assist her, both for her own sake and to keep my own knowledge of the language in use," I replied. "If an arrangement can be made, will there be any objection to my giving her instruction during the noon recess?"

"I think not—I really think not," Mr. Lee replied, with more cordiality than he had before manifested. "Thank you for suggesting it. I feel reluctant to accept such a sacrifice from you, but since you are willing to make it, I will inquire if it be permissible to teach French beneath this roof out of regular school-hours."

Saying this he bowed a farewell, but, as I again observed, did not offer his hand. The lights were now extinguished, and I accompanied the deacon and his son to their home. After a fresh course of embrocations, herb-tea, and petting, I retired to the soundest slumber I had enjoyed since my arrival upon the scene of my pedagogical labors.

CHAPTER VII.

SMOOTH WATERS.

THE outset of my voyage upon the sea of teacher-life was stormy, but luckily for me the storms were brief. I now knew that the people of the district had confidence in me, and I learned that I was considered, in the words of at least one influential personage, "a first-rate fellow, that meant to do the square thing by all concerned."

Approbation and appreciation are excellent stimulants to exertion. I tried to deserve the first, and I felt grateful for the last.

I was really happy in the performance of my duties. I had no time for society, so did not miss it. From nine o'clock in the morning till four in the afternoon I was constantly occupied, only allowing myself time for a luncheon at noon, devoting the remainder of the recess to Mary Lee. After school, I had my walk to my boarding place, and perhaps a trial of strength, snowballing, or wrestling with Robert Lawrence, or some of the elder boys, who were now friendly and familiar with me out of school, but not the less respectful and obedient within the hours.

After supper I went to the deacon's, or Robert came to me for his recitations, which occupied about two hours. I then mingled with the family, or went out to walk for half an hour, and devoted the remainder of the evening to my own studies.

Of course, this programme was sometimes varied. We had singing-schools each alternate week, an occasional spelling-school, and sometimes a merry-making at some of the farm-houses. Sometimes, as was the case, when I boarded at Mr. Lee's, I spent the evening, after Robert's departure, in social converse with the family.

Mr. Lee was absent during the time I spent at his house, so that, somewhat to my regret, as he was the best informed man in the district, I had no opportunity of improving the acquaintance formed at the school-meeting.

Mrs. Lee was an invalid, with a sweet, careworn face, that must have been very beautiful in her youth. There was a timidity and anxiety about her that affected me painfully; but I readily accepted Miss Parkson's statement, that this strange manner was the result of nervous disease. As to Miss Parkson herself, though she complained of the loneliness of their present home, she did not feel it, apparently, so much as I would have supposed, being greatly occupied with the housekeeping, of the cares of which she entirely relieved her sister. She was one of the best performers upon the piano I had ever heard, and found such pleasure in her music that she never seemed to regret, for herself, that there was no society.

The tastes and manners of this family so much resembled those of my mother and sister, that it is not remarkable that I was happy with them, nor that I deeply regretted to leave. But my time expired, and I had to seek other and less pleasant quarters. The next day, when returning from school, I meet Mr. Lee. With his usual courtesy, he expressed much regret at the necessity which had forced him to be absent during my stay at his house. After my pleasant experience in his family, I was pained to find myself indulging in a vague impression that he had left home purposely to avoid me, and that his outward courtesy covered a dislike, while, at the same time, he did not hesitate to use me for his own benefit. As I walked away, chiding myself for these thoughts, I could not but remember that he had never taken my hand, never welcomed me beneath his roof, and that upon this occasion, while profuse in his compliments and regrets, he never once allowed his eyes to meet mine.

The winter wore away, my school became orderly and greatly improved, Robert Lawrence and Mary Lee progressed beyond my best expectations, while I was by no means dissatisfied with my own advance. I was happy, because benefiting others while advancing my own interests, and because I had won confidence and good-will where I was at first regarded with distrust, both of my powers and my intentions.

Before spring I had been the round of the district, spending the allotted time in each family, except in one or two cases where sickness or family affliction had prevented.

When I had still about a month's services to complete, the Lawrences, who were still my best as they were my cherished friends, insisted that the

remainder of the time should be passed in their comfortable old pilgrim mansion.

After this invitation had been accepted there came, one morning, a tiny note from Mrs. Lee, urging me to make her house my home; while beneath her delicate timid-looking lines, there appeared, in bolder writing, "I concur. Jane Parkson." I laughed aloud as I read this characteristic addition, but I was conscious of a deeper gladness than mere amusement. The feeling of repulsion, of which I have before spoken, had kept me from any attempt at intimacy with Mr. Lee. And when I learned that he left home immediately after the dispatch of Mrs. Lee's note, the fact seemed to give additional force to my suspicions, though it removed the only objection I should have had, if free, to the acceptance of the invitation.

It was a happy month that I spent at the Lawrences. I had ceased to observe with distaste the uncultivated habits of the family. Their genuine goodness, and the regard shown me, obscured all else. Robert had become more a gentleman in externals, and more companionable since I had known him. I regarded him almost as a brother, and was glad that he proposed to enter Elmtown College at the commencement of the next year. I resolved that he should become an inmate of my mother's family.

The five months that I had spent here seemed to have knit me closely to all those with whom I had been intimately associated. My scholars had become very dear to me. Every cherry-cheeked hoyden had a separate hold upon my affections. Every coarse youth, half-taming himself to a ludicrous imitation of my manners and speech, was a friend. Mary Lee nestled in my heart. Certainly, except my sister Emma, I had loved no one as I loved her, and I looked forward to our separation with a pang.

We had a quaint little exhibition at the close of the school, and then the farewells were said. After a few days of friendly visiting and ramblings with Robert about the spring woods, I returned to Elmtown.

SHALL AND WILL.—The use of *will* for *shall* in the future tense and first person, seems to be increasing among us. We mean, of course, its use to give a simple statement in the future, without any act of the will implied. It comes from the South. The reports of Congressional proceedings used to be full of it. "If the motion is laid on the table we will be unable to take it up before Monday," etc. By an error of the same sort *would* is used for *should*. "I sent word that if he was not here by noon we would be beaten," and the like. It is a pity that the bad habit should spread over all the country. Here among us, fortunately, the only rule one needs to follow as to these words is to use them in the way that is most natural; for our habits, at least among the common people, is all right.

SLANG.—A DIALOGUE.

Characters—KATE MERRILL, a school-girl; LIZZIE, Kate's little sister; MARY WILLIAMS, Kate's cousin; HARRY, brother of Kate and Lizzie; RALPH, Mary's brother.

Scene—Mr. Merrill's Parlor. Enter KATE and LIZZIE, with school-books, etc., just returned from school.

Lizzie. We shall tell father of Harry; shan't we?

Kate. No, I don't think that will be best; but I shall give Master Harry a piece of my mind. Just to think of a son of Morton Merrill swearing in the street! It is perfectly shameful!

Enter HARRY, with one skate.

Harry. I say, Kate, have you seen my other skate? I'm sure I left them both in the hall, and now I can't find but one anywhere.

Kate. No; but I should like to see you a few moments. I have something to say to you.

Harry. Well, hurry up, then, for I'm going off skating with Tom Harding, as soon as he comes, and I want to find my other skate.

Kate. Tom Harding is not a very nice boy for you to be with so much. You were with him this afternoon, when I heard you using language I never thought a brother of mine would use.

Harry. I should like to know what I said.

Kate. You don't remember *swearing*, do you?

Harry. What do you mean, Kate Merrill? I never did such a thing in my life.

Kate. Lizzie and I both heard you; didn't we, Lizzie?

Lizzie. Yes, we did; you said "By golly," and Kate is going to give you a piece of her mind for it.

Harry. She won't have much mind left by and by. But I say "By golly" isn't swearing any more than "Fiddlesticks," and you both say that.

Kate. Oh, yes it is, Harry; it is swearing to say "By" any thing.

Harry. Well, "Golly" isn't any thing; so there, now!

Enter RALPH and MARY.

Harry. Hulloo, Ralph! Will you go skating? I am going as soon as these girls get through scolding me.

Ralph. Why, what are you being scolded for now?

Mary. I thought something was the matter. What can it be? Have you been doing any thing naughty?

Harry. No, I haven't; but these girls will have it that "By golly" is swearing. Is it now, Cousin Mary?

Mary. It is, certainly, a rowdyish expression, which I hope you will never use.

Kate. There, now, Master Harry!

Harry. Well, then, "Fiddlesticks" is "rowdyish," too; and Kate that a dozen times a day.

Kate. But you never heard me say it on the street.

Harry. No ; but you say other things, though. Cousin Mary, I must tell you something. Kate and her darling friend, Etta Chamberlain, were walking in their usual loving manner the other day, their heads so close that I couldn't have fired a chestnut between 'em without hitting both their noses, when, turning a corner, whom should they meet but Kate's music teacher, Mr. Nelson. As the girls had just been talking about him, they were, of course, very much surprised ; and Kate exclaimed, "Jerusha Stykes !" whereupon Mr. Nelson made a profound bow to Etta, and said, "I am happy to meet you, Miss Stykes." You can't imagine how mad those girls were. Poor "Jerusha" hasn't quite recovered yet.

Kate. You provoking boy ! I should like to know how you heard about it. But really, Cousin Mary, I was vexed enough, to have Mr. Nelson hear me say that. I know he will think me very rude.

Mary. My dear Kate, it is not what people think we are, but what we really are, that should give us most care. I have long wished to speak to you about this matter. You were quite indignant at Harry, when really the expressions you use are hardly more refined.

Kate. But, Cousin Mary, I don't mean to say such things, except when I am with the girls. You are not a school-girl, and don't know how they all use such expressions.

Mary. School-girls are not the only guilty ones. Many of their older sisters, who would be ashamed of an *ungrammatical* phrase as detracting from their culture and refinement, are not ashamed of *slang* phrases, and often do not hesitate to use language that is *worse* than slang. They may not intend to use it except among themselves, but the effect is the same in the end. Habits of conversation can not be dropped at will, and a single unguarded word may reveal a practice that can not but degrade a girl in the estimation of her right-thinking friends. But, setting aside the right and wrong of the matter, the habit is vulgar and unlady-like, and I really wish you would avoid it. I know that Ralph agrees with me. Don't you, brother ?

Ralph. Not exactly, Mary. You say, *setting aside the right and wrong of the matter*. In my opinion we have no right to set that aside. The question, "Is it right?" should be regarded more than "What will people think?" Can we indulge in such expressions when we remember that "our conversation is in heaven," and that for every idle word we shall give an account ?

Harry. Ralph, you're a brick ! Kate won't dare to scold me any more to-day, so I'm off. You'll come with me as soon as I find my skate, won't you ?

Kate. Harry is right. I am too much in fault myself to presume to correct him. I thank you for correcting me, and I assure you I realize the folly of the habit—for it has been nothing worse—and really intend to break myself of it.

MY EXPERIENCE.

HAVING taught just enough to know my aptness, and to feel the defects of my education, I laid aside my badge of office, and spent three long years in preparation for my life work. I left school full of enthusiasm, eager to enter upon my chosen task. I had no romantic ideas of dainty children, whose "young ideas" would "shoot" spontaneously. I had a realizing sense of big boys and ugly girls, to whom arithmetic was a mystery and grammar an abomination—of restless babies sent for me to amuse—of exacting parents and cross directors. But nothing daunted, I secured a certificate and sought a place.

The town schools were engaged for the year in the place I first visited, and I was advised to make application for the Sandford school. A friend accompanied me to the house of the director, and, after a few remarks, broached the object of our call.

"Didn't want a woman nohow ; girls didn't teach for nothin' but money to dress with—sech doin's had got to be stopped if *he* had to spend the whole winter—he was going to have order, and things had got to be done *thorough*."

I could not forbear a smile as the gentleman proceeded for several minutes with language far more vigorous than elegant. My friend, however, interposed a few words as to my attainments, etc., and exhibited the certificate above mentioned.

"They had partly engaged a Mr. Jewett," the director said. "The deestrick wanted a man, and were bound to have one—though like's not, they'd have to take a woman teacher at last."

Finally, he decided that if he failed of securing Mr. Jewett, he would see if we could agree as to terms. Forty-five dollars per month were the wages of a gentleman ; thirty for a lady—quite a difference, I thought, but "women needn't expect more'n that ; 'twas a splendid chance for a woman !"

Mr. Jewett, a young man notoriously intemperate, was secured to conduct the education of those young and impressible scholars. What a mark he may leave on their tender minds ! The County Superintendent told me that the school was as small, and as easily governed, as any he knew. However, the "deestrick" have their chosen teacher.

At the next place, I was recommended to try the school at Clipton. So to Clipton we journeyed : found Dr. Judd, the director, at home, and introduced business immediately. The same idea was uppermost here as at my first place of application. A man they must and would have, if he could be found. School consisted of seventy scholars who required thirty classes to accommodate their varied attainments, from A B C's to algebra. Wages were sixty dollars for one of the "lords of creation ;" thirty for a "weaker vessel !" I was indignant, and was it not with a righteous indig-

nation? Call this an enlightened age—an age of humanity and justice! Dr. Judd admitted that, in many cases, a lady's government was better than a gentleman's; that she had more *tact* for school-teaching, and said he "shouldn't think much of a man that offered to teach for forty dollars per month."

"Then, why not pay a lady decent wages, and act like men and Christians?" my friend said.

"Well," he replied slowly, "public opinion is settled, and a woman can not expect as much as a man."

"*Can not expect it!*" Yes, that is a truth, and a shame upon our civilization for the fact. What a glorious thing, if public opinion could be unsettled, and our services recompensed equally with our brothers, *as far as we do the same amount of work!* I do not cry out for extra privileges, I do not want any favors—all I ask is justice.

A meeting of the district was held the next night, and the school "bid off" by a young girl who offered to "keep" it for twenty dollars per month. What she intends to do with her thirty classes, I can not tell.

These are but two of the seven refusals I received in the course of three months. No school has appeared for me to teach, and as bread and butter is still a necessity, it behooves me to settle upon *some* course. Shall I devote my heart and brain to the retailing of goods in a fancy store? Shall I resort to the kitchen for a livelihood? As far as dollars and cents are concerned, that would doubtless be as good as any thing. Sewing does not admit of much out-door exercise and would be a slow murder to me. Coloring photographs is said to be remunerative, but that requires much practice. I think of the three long years of preparation—not to mention the expense incurred—and I am disappointed.

There are multitudes of women shut out from school-teaching because of wrong ideas on the part of those in authority; and so long as preference is given to unqualified gentlemen and cheap-working young girls, just so long will educational interests languish, and well-fitted teachers be turned into other fields of labor.

MUSIC IN PUBLIC SCHOOLS.

WE commend to the perusal of our readers the following article from the pen of Mr. Parrish, Superintendent of the Schools of New Haven, Connecticut:

It may be deemed as evidence of progress in teaching the science of music, that children of seven to ten years of age are so instructed that they can read the notes with the same facility that they pronounce words in their reading lessons; that they name the terms and explain the principles of the science of music as easily and intelligibly as those in their

arithmetic lessons ; and that they are able, both individually and in concert, to render the notes by their proper tones. Such results have not been found common among children of the ages named, even with very good private instruction. Yet there are two thousand pupils, at the present time, in our city schools, under such thorough drill, that their progress can not fail to gratify those who may chance to witness their performance, and surprise those who have not been aware of what has been accomplished during the past year.

The time devoted to singing is brief, being less than an hour to a class, each week ; but the beneficial results are manifest. It serves to give a pleasing variety to the monotonous duties of the school-room. A new science is added to the other attainments of the pupils, without apparent loss of time. As an aid in discipline it is admirable. Of this, any one observing the drill of a class during the singing hour, would be abundantly satisfied. The fixed attention of each individual ; the precision of movement in marking the time ; and the constant aim to utter pure and correct tones, all contribute to cultivate a high degree of promptitude and exactness. Perhaps no other exercise, equally adapted to both sexes and to large numbers at the same time, could be devised to call into use so many powers, both mental and physical, at the same time as this.

As a mental exercise, it fixes attention, concentrates thought, cultivates quick and nice discernment. As a physical exercise, it brings into healthy action those vital organs, which can not be reached so effectually in any other way. The Germans, who sing almost universally, claim that singing is a preventive of diseases of the lungs. Its utility as a gymnastic exercise can hardly be doubted by those who are accustomed to the use of the vocal organs in singing.

The benefit to the individual, and the influence on the whole school, in the promotion of prompt systematic action and regularity, are of great value, for present success. But beyond this, in the future, the consciousness of a more just appreciation of music from an acquaintance with its principles must ever be a lasting gratification. To the home and social circle, vocal music will add a genial influence of a pleasing and elevating character. Nor should it be forgotten that, for the religious worship of all denominations, early and thorough preparation is here made to supply a want not otherwise easily provided for.

In short, the whole tendency of musical instruction in the public-schools is to refine, elevate, and improve the child, to make him a better citizen, and enable him to exert a better influence.

If parents and all persons interested in the welfare of the rising generation, would more frequently visit the schools and observe what is done in this and all other branches of study, teachers and pupils would be stimulated to more vigorous effort, and the real value of our public-school system would be better appreciated.

ROLL-CALLING

MUCH time is wasted, especially in large schools, in "calling the roll." Sometimes it is thought necessary to read in fire-company style the names of the pupils in attendance—those present responding "present," unless, as is often the case, they prefer the less musical, but more easily uttered, if not more significant, Anglo-Saxon "here." In certain mixed schools, the amount of time thus consumed is considerably reduced, by causing the lists of the two departments to be read at the same time. The writer has been present during this exercise, on several occasions. The effect produced by such a jargon of *heres* is exceedingly ludicrous, and the cause ought not to be tolerated where there is any desire that "all things" should "be done decently." There are other objectionable devices, less consumptive of time than those already mentioned, but only one need be specified. It is that which places the responsibility of determining who are present upon one or more of the teachers, or upon monitors, who, during the exercise which would otherwise follow the roll-calling, determine, by the eye, who are to be numbered as absentees, and mark them accordingly. This method is objectionable, because the teachers or monitors ought to be allowed to spend the season thus appropriated in the same manner as their associates. Especially should their claims be regarded, when the exercise is of a devotional character.

The best practical method known to the writer is the following: An alphabetical list is prepared as usual, and each pupil receives a number corresponding to the position of his name in the list. This number he retains during the term.

The roll is called thus: At a given signal, the pupil whose number is one, says "one." If he is absent, the teacher calls the number and notes the absence. Pupil, number two, if present, says "two." If not, the teacher does as in the first case, and thus the numbers are all called, none being named until the preceding one has been spoken either by pupil or teacher. Some have objected to this method, because a pupil may call a schoolmate's number and relieve him of the penalty of the absence, but this is an objection which does not hold in practice, for the quick ear of the teacher will more readily detect any attempt at deception than if, with the primitive method, a pupil should shout "here," when the name of his absent school-fellow is called. I know of no other objection.

DR. WAYLAND appointed as his literary executors Mrs. Wayland, and his sons, Judge Francis Wayland and Rev. Prof. H. L. Wayland. They will at once proceed with the preparation of a memoir of him, and will also provide for the issue of a uniform edition of his complete works.

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SET OUT TREES.

AS spring advances, and warm weather comes on, boys and girls will be much more interested in out-door exercises, and in the opening leaves and flowers, than in their books ; and it rests with teachers to determine whether this feeling shall be made to create additional interest in school, or whether it shall tend only to draw their pupils away from school. Generally, little or no care is taken to make school-life attractive, or even comfortable, and yet people wonder why children do not like it. Until it becomes natural to like what is ugly and disagreeable, or more care is taken to improve our schools in respect to appearance, particularly in the country, we ought not to expect the children to like school. Older people certainly can not perceive any thing very attractive in the majority of our schools. One who did not understand the motives which usually govern the selection of school-grounds, especially in the country, would be likely to suppose that our boys, in the fear of the birch, had determined to suffer neither that tree nor any other to flourish within school limits, and had carried their resolution into effect. But it is not the fault of the boys that school-grounds are barren and ugly. This is too often the chief cause of their being set apart for school use,—their availability being determined by the fact of their unfitness for any thing else ; while little or no care is ever taken by those in authority to make them any more pleasant or inviting than at first.

There can be no better or surer way of remedying this defect than by turning to good account the interest in growing things which children naturally feel as spring advances, by inciting them to decorate the school-grounds with trees and shrubbery. The moral influence of pleasant surroundings is very great, and the sensitive nature of childhood can not fail to be affected by it. Nor can we expect the contrary effect when surroundings are the reverse of beautiful.

Do not say that children can not be made to feel sufficient permanent interest in the matter, to take the trouble to procure the trees at first, or to protect them after they are procured ; that in a little while they will be

broken down and destroyed. We have seen the experiment tried, and know better. Let the boys and girls name their trees for themselves, or for their friends, and they will watch and care for them with a tender regard which older and colder hearts can scarcely appreciate.

MIDDLE-CLASS SCHOOLS IN LONDON.

CONSIDERABLE interest is being manifested in London, with regard to a scheme proposed by Rev. William Rodgers, for establishing in that city cheap schools for the children of clerks, tradesmen, and other persons in the same rank in life, for whom it is claimed no adequate system of education exists. The design of Mr. Rodgers and his supporters in this movement is to erect, first, in some central locality, a large building capable of accommodating from eight hundred to a thousand boys, and afterward, as funds and other circumstances will permit, to establish, in other parts of London and the suburbs, other schools, as branches of the central school.

The scheme has been received with great favor among the wealthy banking-houses of the city, and more than £40,000 have already been subscribed for the establishment of the first, or central school. From others, however, and especially those who ought to be best acquainted with the condition of the schools of London, the enterprise has met with considerable opposition. The alleged scarcity of public-schools specially adapted to the wants of the middle classes, is denied; and it is hinted that the "clerks" are in reality endeavoring to attain the incompatible conditions of extreme cheapness with what we would call in this country a very select school; and that while they complain that the schools where a practical or commercial education is professed to be given, are at once poor and expensive, the real objection to them is that bugbear of cockney gentility—the "mixture."

If it is true, as stated, that with but one or two exceptions, none of the middle-class schools of the city are more than half full, or at least working up to the full measure of their capacity, Mr. Rodgers' scheme is likely to prove not only practically unsuccessful, but so far as it does succeed, it will do harm rather than good.

So long as there are already scattered over the city many valuable foundations requiring only public attention and support to become fully

adequate to meet the educational wants of the people, it can not be other than poor policy to establish more schools of the same class. If the money which is subscribed for the erection of new buildings were applied for the improvement and cheapening of the instruction given in the schools already in successful operation, it would promote far more the interests of education.

The same mistaken policy is pursued with us, though chiefly with regard to the higher class of schools. The result is, ten colleges are erected where one is needed, and instead of having a few first-class institutions, large enough for the accommodation of all, and rich enough to provide superior instruction, at little cost, to the student, we have a multitude of inferior, half-sustained establishments, which are colleges only in name.

THE METRICAL SYSTEM OF WEIGHTS AND MEASURES.

THE attention of our readers is invited to the letter and circular of Professor Newton, given on another page. The circular is signed by many of the leading educators of the country.

The practical advantage of a regular system of weights and measures, especially one in harmony with the numerical system in general use, can scarcely be overestimated. And since the metrical system will, doubtless, be officially adopted by our Government at no very distant day, it becomes the duty of teachers not only to make themselves familiar with its character and claims, but to assist in preparing the people for the change.

No stronger argument can be offered in favor of this system, than the fact, that in little more than half a century it has been adopted by the larger part of the civilized world; while it has almost everywhere received the support of men of science.

The superiority of this system is due to its entire conformity to the decimal notation, and the consequent simplicity of all operations of reduction and computation; and not, as is sometimes stated, to any real or fancied superiority of the metre as a standard.

The base of our present system, the English yard, is just as *natural* and convenient, and just as determinate, or rather indeterminate, as the metre; both are arbitrary, and neither, if destroyed, could be restored in conformity to its definition. If a change is made, however, and a decimal system introduced, the metre should be taken as the standard. The commercial

advantage of a system common to all nations, as this bids fair to become, should outweigh all minor defects and disadvantages.

It is needless to deny that the change proposed would cause great inconvenience at first, and loss, but it should be borne in mind that these evils would be temporary, while the gain would be perpetual. If the loss of time and labor occasioned in a single year by our present incongruous system could be determined, we venture to say that it would go a great way toward paying for the introduction of more convenient weights and measures, while the inconvenience incident to a change of systems would be greatly lessened, if the new system were previously taught in our schools.

If the advantages which the decimal system offers in all transactions of calculation and account were properly presented, and the convenience of the system fully understood and appreciated, there can be little doubt that it would receive the hearty support of all intelligent people.

THE ABSURDITIES TAUGHT IN OUR SCHOOLS.

WE intend to give early attention to the errors and absurdities inculcated in the school-room, by publishing a series of articles with the above caption. Certain methods in teaching, from the alphabet to rhetoric; from the multiplication-table to Euclid; from Primary Geography to Geology, will need attention. To accomplish our purposes properly, we shall need the co-operation of the best teachers. To their pens we must look for aid. And we call upon them to assist us in pointing out what is wrong, and in explaining what is right. We have had too much "gentle, silver-tongued talking." Let us all go at the work with a will, and speak plainly upon what is defective. Thus we can accomplish great good. It may be urged that many absurdities grow out of imperfect and pretentious school-books. That there are trashy text-books, is too true; but that is no excuse for intelligent teachers. For it is also true that, of every thousand school-books published in America, some three or four are really meritorious. Let teachers select these, and use them in spite of all the blandishments of publishers, and the wiles of publishers' agents. A fearful responsibility is assumed by teachers who propagate the absurdities of some of our crazy book-makers.

EDITORIAL CORRESPONDENCE.

GOTHA, February 16, 1866.

The Celebrated Institute of Schnepfenthal.

DURING these past months at Gotha, I have taken occasion to visit the celebrated institution of Schnepfenthal, where so many young lads have, during the past half-century, received the first elements of good knowledge, and their first initiation into the discipline of school-life. To me it has its great interest, because it was the place where Carl Ritter, the geographer, received his preliminary education, and the place where he loved to be, up to the latest days of his life. And even on his death-bed he did not forget Schnepfenthal, but sent his love and kind remembrance to an old school-friend living there, telling him again how fondly his mind reverted to the scenes and the companions of his youth.

As a school, Schnepfenthal came into existence amid the closing years of the last century. Its founder was the celebrated Salzmann, and one of its first chief teachers was the scarcely less celebrated Gutsmuths, both of them named among the most experienced educators of their age. The school came to the height of its reputation very soon after its establishment, and in the past eighty years it has well held its own, the principles which Salzmann introduced having been fully retained. Indeed, it has remained in his family : his own son was his successor, and his grandson now stands at the head, while two other grandsons are the two chief teachers. It is such a school that its like can hardly be found. It grew out of the reaction against middle-age ideas, and hence its course of study is thoroughly practical, the sciences and the modern languages taking the place which is generally given to the ancient tongues. The scholars are trained to habits not only of great diligence, but to hardihood and the utmost simplicity. Not that they pass through the discipline which converted Frederick the Great's muscles into steel when he was a boy, but they are toughened and trained to an astonishing degree of vigor. Walks of eight, ten, and twelve miles are ordinary excursions ; and as they are generally made in quest of botanical, mineralogical, or geological specimens, and in the companionship of the gifted teachers, all of whom are men of eminence, these occasions are of as much profit as pleasure. Ritter was, as a boy, by no means remarkable for the strength of his constitution, but the daily regimen at Schnepfenthal soon made him able to walk his eight or ten miles, and even in the winter-time to lie for a half-hour on the ice, sunning himself, and yet taking no cold. Mr. Long, one of the teachers, and a grandson of Salzmann, is a man of such vigor that he has walked seventy miles in the course of a day, not to mention the odd miles which he walked in the city, to which he walked from Schnepfenthal, and from which he returned to his home before he slept. And truly, this beautiful Thuringian forest is one of the finest places in the world to establish a school, where an initiation into the beauty of this world, and into the riches of all the different natural kingdoms, can go hand in hand with the development of all intellectual and moral traits. The spot where Schnepfenthal lies, is one of the loveliest conceivable. Situated about eight miles from Gotha, it lies on a gently sloping eminence, which rises just beyond a broad, fruitful,

rolling plain. At the foot of this eminence is a vale, through which you may pass into the Thuringian forest. Nothing could be more lovely than the views which are afforded as one follows the little brook which issues from this valley, and traverses the Thuringian meadows. The mountains are not grand, although, in a few instances, they rise to a height of three thousand feet ; but gentleness, grace, softness of outline, and depth and variety of green, are their most striking characteristics. About a mile and a half up the valley, after leaving Schnepfenthal, the meadows widen, the mountains recede, and there is space gained for a palace for the Duke of Saxe Coburg Gotha, whose rare loveliness is confessed all over Germany. Its beauty is like the beauty of a dream. I have never seen its superior, rarely its equal.

In the midst of such scenes are the lads of Schnepfenthal trained, and the influence of them they generally carry away with them into the world. The whole life there is so simple, quaint, homely, childlike, that it rivets the very souls of the pupils ; and it is no wonder that those who are there now, are, to a not inconsiderable extent, the sons of those who, in former years, were trained in Schnepfenthal. What is theory elsewhere, becomes fact at Schnepfenthal, and such is the genuineness of the teachers, that their natures impress themselves upon, and are reflected in those of their pupils. That assumed dignity, or its reverse, that pretense of love to childhood which is consistent with the shrewdest and the coldest calculations, has no lodgment at Schnepfenthal. You would be pleased, my reader, if you could see these men ; notice the extreme simplicity of their apparel, often of genuine homespun stuff ; watch the kindliness of their demeanor in all their dealings with the pupils ; see the good feelings and mutual confidence which prevails, and discover, with pleasure, that so far from any desire of taking advantage of this honorable confidence, there is the unvarying manifestation of those qualities which one wishes most to see.

So far as the imparting of knowledge is concerned, there is no secret possessed by Schnepfenthal teachers which is not known now, at any rate to the most experienced American educators. It need hardly be said that what we, in our stiff nomenclature call the "object-method," is the only one recognized here, and the only one which has been in use since the school was founded. The object-system is, of course, simply the method suggested by nature : it is the one which would be pursued by any teachers whose minds were not perverted by a false system, long cherished and traditionally received ; and to come to it, as we are doing in America, is to advance to nothing new, it is merely to get back to the method of Aristotle, of Socrates, nay, of Solomon, who discoursed of every thing, small and great, down to "the hyssop that groweth upon the wall." To speak of it as a new method is to overlook the wisdom of those who lived centuries ago, for we have lived to see a resuscitation of it, not a discovery. In Schnepfenthal, the object-method has been practiced for eighty years. From the founding of the school till the present day, all the studies which could be taught by familiarizing the eye and the senses of the pupils with the objects treated of, by them have been pursued by this method, all the natural sciences have been taught in this way, and those higher and more abstract studies which do not depend upon observed facts and phenomena observable in daily life, have been lightly passed over, as more suitable for manhood and matured powers, than for the immature mind of childhood. It

was, for example, at Schnepfenthal that Ritter learned how to study geography aright. It was not alone from the pages of a text-book, but from the illustrations furnished by the varied scenery of the Thuringian forest, that he learned how to understand the configuration of the earth. I have long known this of Ritter, but I have never before enjoyed the opportunity of seeing the place where he began to make those geographical generalizations which went on expanding his whole life long. In the pleasant Thuringian hill, varying from a thousand to three thousand feet high, he studied the characteristics of Alps and Himalayas. In the little Seine which meanders through the meadow before the school, Ritter found Volgas and Amazons. In the little lakelets which ornament the ducal gardens, he saw Superiors and Caspians. In the fertile plain which stretches from Schnepfenthal to Gotha, Ritter discerned prairies, pampas, and savannahs; in the high table-land of Saxe-Gotha he recognized a miniature Thibet or Mexico; in the Thuringian wood, the primeval forests of Maine and Oregon. In a word, he found every tract, every road and path of which he knew, to be a world; a microcosm; a field, where not only his soul could become habituated to forms of beauty, but where his mind could rise from simple forms to the largest and the grandest.

And thus it remains at Schnepfenthal to the present day. A great part of the instruction is given in the course of the wanderings made in quest of all the objects of nature. The observing and inquiring faculties are stimulated to the utmost, and there are few who are not enthusiasts in the pursuit of knowledge. The scholars are informed of the problems which interest the world, and are kept alive to all unsolved and urgent questions. I listened to one lesson in geography. The instruction was given, as is the German custom, orally, and without a text-book, the teacher keeping up a running fire of questions as to what he had gone over on preceding days. By thus keeping them alert, and touching on themes which have to do with immediate interests, the attention was fixed, and I have seldom seen the minds of lads more ready to receive what was given them than theirs. There was no secret to be learned. There was no new way adopted. There was an earnest man, entering into his subject, and making it thoroughly intelligible. That was all. The theme of the day was Mexico. He began with a review of North America, and I soon saw that all new discoveries, measurements of mountains, and phenomena generally known to the scientific world alone, were familiar to the class; the teacher brought all these things before the lads, discussed them with them, interested their minds in them, and so made them cling to the memory, and discipline the attention and judgment as well.

Schnepfenthal is what we call a boarding-school—that is, it stands by itself, there being hardly a village near, and the pupils are sent hither from their homes. They all dress alike; wearing, in the summer, a light and graceful suit of striped linen, and on Sundays a scarlet coat. The dress reduces all to a condition of equality, except of mental and moral gifts, and the question of high and low, rich and poor, gets no entrance here. It is an admirable feature, especially in this class-ridden country, and is worthy of the wise and excellent founder of the institution. And altogether looked at, in whatever light one will, here is an institution which may well stir one's enthusiasm, and elicit praise from the coldest. Men who have seen much of life, know that if we only go down deep enough,

we find enough and more than enough to criticise and condemn in all that seems fairest ; and we all know that as we grow old we find that we must always speak in cold and careful language. But I can not find it in my heart to do this of Schnepfenthal. Here is a school which may be held up as the attainment and realization of a high ideal ; as something which makes the dreams of a poet real ; a place where purity, simplicity, frankness, industry, and all the old homely, peaceful virtues go hand in hand—a real Arcadia. How long this will be the case no one can tell. A shrewd, managing spirit may yet display itself even there. The show and glitter, and sham of the great cities, may reach even its quiet and wholesome atmosphere, and Schnepfenthal may keep its name, but lose its nature. I trust it will not. For the sake of Salzmunn, Gutsmuths, and the Lenzes, I hope it will not. For the sake of all that is good, true, permanent, and real, I trust that the place which nourished the mind and heart of Carl Ritter, will, for many generations yet to come, send forth men cast in the same mold, even if they may not attain his fame.

W. L. G.

NEW HAVEN, Conn., March 5, 1866.

MR. EDITOR : DEAR SIR—I was much interested in the scientific column of the current number of the MONTHLY. Allow me to say, however, in regard to the “eggs of Pharaoh’s serpents,” that they are decomposed on combustion not only into *mellon*, but also into the *sulphide of mercury*. As no decisive experiments have yet been made, much doubt is still expressed by good authorities, whether the substance of which they are composed is at all deleterious, when burning, or before ; though there is a possibility that a small portion of the mercury may be volatilized during the deflagration.

Very truly, MYRON N. CHAMBERLIN.

YALE COLLEGE, March 12, 1866.

MR. EDITOR—I feel sure that a republication of this circular in your EDUCATIONAL paper would be of interest to your readers, and would promote the cause of education.

Yours, very truly, H. A. NEWTON.

[CIRCULAR.]

1. The decimal system of weights and measures which has the *metre* for its base, is in partial or exclusive use in nearly all of the countries of Europe, and its use is increasing.
2. In almost every department of science these weights and measures are sometimes employed, while in some departments all others are obsolete.
3. The terms of the system are gradually becoming more common, and will, doubtless, at no distant day, be met with in popular journals.
4. Preliminary steps have been taken by two different branches of the United States Government looking to the possible adoption in this coun-

try of this, or a similar system, in place of the incongruous weights and measures in use. In case of such an adoption by the Government, the necessary inconvenience, attending the change, to the people, will be very largely diminished, if the metrical system shall have been previously taught in the schools.

5. This system is, however, left out from many of our best arithmetics, and in most of the remainder, if not in all of them, it is very imperfectly developed.

We therefore respectfully urge :

1. That to the arithmetics now published an appendix be at once added, that shall contain a full explanation of the *metrical system of weights and measures*, and of their relation to the weights and measures now in common use, and that the whole be illustrated by suitable and numerous examples.

2. That in every *revised edition* of arithmetics now used, and in every *new arithmetic*, a proper development of this system have a place in the body of the work, and that in examples for practice occurring thereafter there be frequent reference to these weights and measures.

The metrical system of weights and measures is in exclusive use in France, Holland, and Belgium. Italy, Spain, Portugal, Greece, Mexico, and most, if not all, of the South American States have adopted it. In some of these countries, however, its use by the people is not compulsory. Parliament has legalized its use in the United Kingdom. Austria, Prussia, and the other German States have signed a convention agreeing to adopt systems of which the metre is the base. There is reason to believe that Russia, Sweden, and Denmark will follow the example of the other European States.

The legislature of the State of Connecticut, in June, 1864, recommended to school officers that this system be taught in the schools of the State.

EDUCATIONAL INTELLIGENCE:

NEW ENGLAND.

MASSACHUSETTS.—Hon. H. F. French, President of the Massachusetts Agricultural College, has just made his report for the last year to the legislature. Of the 360,000 acres of land granted to the State by Congress, for the benefit of agriculture and the mechanic arts, 136,480 acres have been sold for \$110,864. By act of the legislature, one-tenth of the income of the fund derived from the sale of the land scrip was allotted to the Agricultural College in payment of its farm; and one-third of the fund derived from the remaining nine-tenths was assigned the Institute of Technology, at Boston. From the total appropriated to the College, \$27,318 have been realized, and 3,690 acres remain unsold. \$5,129 have been received from the town of Amherst, which subscribed \$30,000

as a building fund. There may be difficulty in obtaining the rest of the Amherst subscription, as several taxpayers of that town have petitioned for an injunction upon the town authorities to restrain them from issuing town-bonds for the amount.

—The work of increasing teachers' salaries goes on well in this State. Lowell and Charlestown have added a large percentage to the salaries given last year.

—During the past year Harvard College received \$166,929, and expended \$154,240. The donations during the year include \$50,000 from Samuel Hooper, \$10,000 from Tyler Bigelow, and \$3,000 from Dr. Alexander Thomas. The present library building is stated to be much too small, and the librarian, in his report, asks for an appropriation of \$300,000 for a new building.

CONNECTICUT.—The new library build-

mg of the Wesleyan University, at Middletown, will be built next summer, and will probably cost about \$40,000.

RHODE ISLAND.—The citizens of Providence are about to establish a Musical Conservatory after the general model of the institutions in Europe. The institution is in operation under Professor Tourjee, and \$40,000 have been subscribed for the erection of a proper building, which will be begun as soon as \$50,000 have been raised.

MIDDLE STATES.

NEW JERSEY.—A new college building, in place of the one recently destroyed by fire, is to be erected at Saton Hall, South Orange, to cost \$50,000. Toward this sum there are \$19,000 insurance, and \$4,000 of materials on hand. Bishop Bailey will order a general collection of \$10,000 throughout the diocese. The balance, it is hoped, will be raised from the friends of the institution.

—The grand-jury of Mercer County have prosecuted the students of Princeton College for their lawless conduct.

NEW YORK.—The report of the Superintendent is at hand. In the State there are 11,618 school-houses, valued at \$9,945,923. During the year, \$799,000 were expended on buildings. In the school libraries there are 1,278,213 volumes, whose reported value is \$634,000, which the Superintendent thinks far too low. The whole number of teachers employed in the State is 26,469, and the number of pupils, 1,007,757, of whom 916,617 attend the common-school. The statistics tell a sad story of the average attendance; while 916,000 children are on the rolls, only about 400,000, or nearly 45 per cent. are in regular attendance. The report refers to the matter thus: "The time may come when compulsory attendance may be necessary, but this should be the last resort. The schools should be made attractive, and the methods and results of instruction so desirable, that truants and absentees will voluntarily seek the school-room." In New York city compulsory attendance has been in a measure introduced. During the year the whole amount of money raised for support of common-schools was \$6,252,242, of which the actual expenditure was, \$5,735,460, being an increase of \$1,165,589 over the preceding year. The Superintendent strongly recommends abolishing the "rate-bill," and making the schools absolutely free; supporting them by taxation.

—At a late meeting of the Board of Education of New York city, a report was received from the Finance Committee, embodying the following resolutions:

Resolved, That the sum of \$2,406,921.69 of the school-moneys for the year 1866 be, and the same is hereby appropriated for the several purposes herein named, and

paid as may be required, subject to the by-laws, rules, and regulations of the board governing payments—viz.:

For overdraft on the city chamberlain, 1865	\$79,490.11
For payments on special appropriations for amount of liabilities on appropriations for 1865	173,241.53
For salaries of teachers in ward-schools	1,365,000.00
For salaries of janitors in ward-schools	65,000.00
For incidental expenses of ward-schools, including fuel	150,000.00
For incidental expenses of ward-schools for ward-bills of 1865, balances due wards	2,500.00
For support of Free Academy, 100,000.00	
For repairs of Free Academy, 5,000.00	
For support of evening-schools, 95,000.00	
For repairs through shop (materials and wages)	10,000.00
For supplies through the depository	175,000.00
For rents of school premises, 25,000.00	
For salaries, superintendents, clerks, etc.	50,000.00
For incidental expenses of the Board of Education, printing, rent of stable and storehouse, horse feed, fuel and gas for ward and evening schools, etc.	50,000.00
For apportionment to corporate schools	33,000.00
For support of normal-school, 8,000.00	
For pianos for ward-schools, 5,000.00	

Total

Resolved, That the sum of \$47,405.85, being the balance of the school-moneys for the year 1866 unappropriated, be reserved and set apart, and paid, as may be required upon appropriations previously made for all purposes for which the school-moneys of the year have not been appropriated.

The report was received, and resolutions adopted.

A resolution was adopted requesting the comptroller to place to the credit of the board the sum of \$500,000, for school purposes for the current year.

PENNSYLVANIA.—By the report of the State Superintendent for last year, it appears that the whole number of children in attendance in the common-schools of the State, is 629,587, a decrease of 8,000, as compared with the year before. The percentage of attendance is only .623. In other words, nearly four out of every ten pupils, whose names were on the roll for 1865, were constantly at home. The percentage of attendance is much better than that in New York.

—Mr. A. Pardee, of Hazleton, Luzerne County, has offered \$100,000 to endow a scientific department in Lafayette College,

on condition that the small balance of the original endowment fund of the college be secured, and suitable buildings be erected for the new department and its students. It is believed that both will be accomplished or secured within a short time.

—The Rev. John E. Graeff, of Philadelphia, has presented to Pennsylvania College a fine telescope made by Merz & Son, Munich. It is of nine feet focal length.

WESTERN STATES.

MISSOURI.—A free-school bill, making equal endowment, but separate schools, for white and colored children, has passed the House of Representatives.

INDIANA.—The "Congressional Township School-fund" now amounts to \$2,128,227, with 84,892 acres of land yet unsold. The revenue from this, distributed in 1865, was \$147,988.

TENNESSEE.—At a late teacher's convention, the Superintendent of Schools stated, that over 80,000 white people in the State can neither read nor write.

MINNESOTA.—A bill, appropriating \$10,000 for the erection of a State normal-school building at Winona, has passed the legislature.

CALIFORNIA.—The amount of money accruing to the school fund on January first, and subject to apportionment, was \$132,774. The amount per child, was \$1.39, there being 95,137 children entitled to apportionment.

SOUTHERN STATES.

VIRGINIA.—Mr. McCormick, inventor of the reaper and mower, has sent General Lee \$10,000 to establish a McCormick professorship of Practical Mechanics.

EUROPE.

ENGLAND.—There is one instance of a person holding a college presidency even

longer than the late Dr. Nott, of Union College. The Rev. Martin Joseph Routh, D.D., was elected President of Magdalen College, Oxford, in 1791, and so continued until 1854, when he died, aged ninety nine.

FRANCE.—The following passage occurs in the Emperor's opening address: "The Budget of the Public Works, and that of Education, have not undergone any diminution. It was of use to preserve to the grand enterprises of the State their fertile activity, and to maintain the energetic impulse of public instruction."

ITALY.—The Italian finances are in a wretched condition. Reductions are made in every department, extending even to the Ministry of Public Instruction, where 5,000,000 francs are to be saved, although every patriot desires to spend more for educational purposes. The nineteen universities are to be reduced to six, at Turin, Pavia, Pisa, Bologna, Naples, and Palermo. The remaining thirteen, even those of Genoa, Cagliari, and Catania may continue as municipal universities, if the municipal and provisional councils are ready to support them, but the Government subvention for them ceases in future, and academical degrees conferred by them will be void, all the students being hereafter obliged to graduate at one of the six government universities.

RUSSIA.—The Czar has addressed a rescript to the governor of Warsaw, promulgating a series of educational measures to be carried out in Poland. Superior and elementary schools are to be established for Poles, Greeks, and Russians, and separate schools for Germans and Lithuanians. All scholars will be taught the Polish and Russian history and languages. The religious instruction will be intrusted to the secular clergy of each respective denomination.

CURRENT PUBLICATIONS.

TO supply the want of a proper textbook in anatomy and physiology, Dr. Draper has published the lectures annually delivered to his classes in the Free Academy.¹ He adopts the division of the subjects offered by his father, Dr. J. W. Draper, and discusses the various topics in a popular manner. He accepts his father's theory

of circulation, which places the cause of the movement in the capillaries, and regards it as capillary attraction. This theory is based upon the facts that the heart does not exert sufficient force to drive the blood through the veins and capillaries; that the portal circulation is carried on without a heart, and upon the existence of cardiac monsters. It has been received with great favor by the leading English and German physiologists, but has been little countenanced by American investigators. There are many objections to it, but the explana-

(1) A TEXT-BOOK OF ANATOMY, PHYSIOLOGY, AND HYGIENE. BY JOHN C. DRAPER, M.D., Prof. of Nat. Hist. and Phys. in N. Y. Free Academy and of Analyt. Chem. in N. Y. University. New York: Harper & Bros. Sec. pp. 306. \$2.50.

tions afforded of the portal circulation and exceptional cases give a force to Dr. Draper's theory altogether wanting in the old hypothesis.

Prof. Draper rather belongs to the conservative school of physiologists, and is not ready to admit innovations. He holds that the red corpuscles of the blood are originally the nuclei of the leucocytes, and, therefore, developed from them, although Longet has shown that the disks exist at the earliest period of life, before the leucocytes make their appearance. He also maintains that the disks die and are disintegrated by the spleen; in this agreeing with Kölliker and Carpenter. The more modern school of investigators, represented in this country by Drs. Dalton and Flint, look upon the blood-disks as regularly organized anatomical elements, which are subject to the same laws of molecular waste and repair as other portions of the body. The researches of Dr. Henry Draper, quoted by our author, throw much light on this obscure point, and tend to confirm the observations of Kölliker. Prof. Draper adheres to the theory of Liebig and Draper, Sr., that the fats and sugars are merely respiratory elements, combustible, to be employed in the production of animal heat. Until very recently, this hypothesis was universally received, but the investigations of Robin and Verdeil, Dutrochet and others have thrown discredit upon it.

Although we think Prof. Draper is somewhat too conservative, yet, as physiology is only in its infancy, his opinion may eventually prove to be right. He has certainly shown that his judgment is worthy of respect. His researches upon insensible perspiration, respiration, and urea, all of which are given in this work, justly entitle him to a high position among experimental physiologists.

The division devoted to hygiene is far superior to any thing we have ever seen in similar works. Instead of superfluous matter, useful only for filling up, we have here a well-digested mass of valuable information. The author is caustic in his animadversions upon the present method of cramming children with indigestible food, when they "should be in the nursery partaking of pap, with a little bread and meat, if it is desired to have them grow up into healthy adults." He is especially pointed with reference to ventilation, and gives

much the same advice as that offered in the MONTHLY some time since. The remarks about plagues and prophylactics are valuable in view of the near approach of cholera. As a text-book for students, or as a book for the general reader, Prof. Draper's work has few equals; indeed, we know of no work now before the public so desirable for popularity of style combined with scientific precision.

In his new work,* Dr. Flint intends to treat of pure human physiology. The first volume, just issued, embraces the subjects, blood, circulation, and respiration. The introduction is a comprehensive statement of physiological chemistry, discussing the nature and characteristics of the proximate principles with great clearness, and giving the various analytical processes more carefully than is usual. The chapters on blood and circulation contain much matter rarely found in works of this size. The effects of transfusion, and the merits of different investigations, concerning the amount of blood in the body, are detailed in an attractive manner. A simple method of estimating quantitatively the organic principles of the blood, is given in Chapter II., and will readily recommend itself to all. Dr. Flint adheres to the theory, that circulation in the capillaries is produced principally by action of the heart. This seems hardly to meet the case, as the walls of the smaller blood-vessels can scarcely sustain the pressure. Dr. Draper's theory, which has been adopted by Carpenter and other leading physiologists of Europe, refers the force in great measure to capillary attraction. This theory is open to no serious objection, and is better able to explain many local phenomena. Liebig's hypothesis, that the sugars and fats are merely respiratory elements, is quietly refuted by Dr. Flint in the discussion of those principles.

In publishing this work, it is Dr. Flint's purpose to give a practical treatise, which shall present only what is actually known. He therefore usually avoids the discussion of purely theoretical or historical questions as unnecessary and embarrassing. He has been at pains to verify by experiment the statements of other physiologists, and thus

(*) THE PHYSIOLOGY OF MAN. By AUSTIN FLINT, Jr., M.D., Prof. Phys. and Microsc. in the Bellevue Hosp. Med. Coll., etc. New York: D. Appleton & Co. 8vo, pp. 502. \$4.50.

has rendered his work authoritative. The language is concise and accurate, the style reminding one of Dr. Dalton's work. The text is singularly free from egotism, the author's numerous investigations being modestly referred to in foot-notes. The work is to be issued in four annual instalments, each of which will embrace certain topics, and will be complete in itself. The amount of matter in the part now published is comparatively small, as the type is large and the margin wide. The price is, therefore, in our judgment, excessive, and will tend to keep the book from students, for whose use it is especially adapted.

The Graham lectures, like the "Boyle Lectures" and the Bridgewater Treatises, are designed to show the "Power, Wisdom, and Goodness of God" by proofs drawn directly from nature. The fourth volume contains six lectures, by Prof. Agassiz, on the structure of animals. In a popular manner the lecturer discusses the different plans of structure, the gradation among animals, the remote antiquity of animal life, together with the triple coincidence in the succession, gradation, and growth of animals, and concludes the course by giving the evidences of an intelligent and creative mind in the plans and variations of structure.

The especial feature of these lectures is the effective, yet inoffensive, method of refuting scientific errors. Thus, in lecture third, the immense antiquity of animal life is distinctly proved, yet the whole argument is so devoid of bitterness, that the staunchest advocate for a literal interpretation of Genesis, chap. i., can hardly take offence. Those philosophers who maintain that the line of development from the monad to man is unbroken, will find food for reflection in the second lecture. The exceedingly pompous preface by the officers of the Brooklyn Institute, under whose auspices these lectures are delivered, in no way enhances the value of the book. It might be well to omit it in future editions. The work is elegantly printed on tinted paper, but the illustrations are after a very primitive model.

SIR WILLIAM BLACKSTONE ASSURES US, WITH

(2) THE STRUCTURE OF ANIMAL LIFE. Six Lectures. By LOUIS AGASSIZ. New York: C. Scribner & Co. 5vo, pp. 128. \$2.50.

all the weight of his great name and learning, that "a competent knowledge of the laws of the society in which we live, is the proper accomplishment of every gentleman and scholar." But this opinion was given more than a hundred years ago. Since that time a great empire, abounding in every thing that is calculated to make a nation prosperous and powerful, and teeming with a population of refugees, exiles, and emigrants from other countries, and their descendants, has deemed it expedient to try the experiment of intrusting all its hopes to its people—all its people—and not exclusively to "gentlemen and scholars." Such is our government, and, consequently, every citizen in it has a holy trust and a sacred duty to perform. The humblest elector among us has more or less to do with making and altering the laws by which our rights are enforced and our wrongs redressed. Consequently, it is more than "the proper accomplishment of every gentleman and scholar," it is the clear duty of every citizen to acquire "a competent knowledge" of our laws and government. If there ever was a government which deserved to be studied and understood, that government is ours. It is not too much to say that the prosperity, safety, and glory of our country, as well as our own individual happiness, depend upon the intelligence of the masses. Ignorant electors will often choose bad legislators and suffer from hurtful laws; it can not, in the nature of things, be otherwise. To bring home, therefore, to the understanding of all, such information as they should possess, ought to be and is an object worthy of the greatest minds. Dr. Wedgwood's work seems to have been prepared with great care and discrimination, and is, in our judgment, precisely what has long been needed in every American home. He has presented with singular success a complete and comprehensive view of the governments of the several States, as well as of the General Government, together, with a summary of all the general principles of law, now in force in the several States, and applicable to, and useful in, the ordinary transactions and business affairs of life.

(4) THE GOVERNMENT AND LAWS OF THE UNITED STATES. By Prof. WM. B. WEDGEWOOD, LL.D. New York and Philadelphia: Schermerhorn, Bausch & Co. 8vo, pp. 477. Leather. Price \$5.

SCIENCE AND THE ARTS.

—M. Frantz, a metallurgist, and M. Henri Faure have announced that they have discovered a method for transmuting silver, copper, and mercury into gold: all these, they say, being only one and the same metal in different dynamic states.

—Engraving upon glass has hitherto not unfrequently been effected by the use of fluoric acid, which often produces dangerous wounds when by accident it comes in contact with the skin. M. Henri Sainte-Claire Deville has recently exhibited to the Academy of Sciences of Paris, some very fine examples of glass-engraving executed by means of a solution of fluoride of calcium in hydrochloric acid, with which there is no such danger. The results obtained by this method are said to be exceedingly satisfactory.

—Stone is now sawn in France with great rapidity and economy by means of a perforated disk of iron, on which a coating of lead has been cast, the perforations serving to connect and bind together the plates of lead thus formed on the two sides of the disk. The lead is kept well covered with emery, which falls on it from a reservoir above.

—A method of coating wood with a varnish hard as stone has been recently introduced in Germany. The ingredients are forty parts of chalk, forty of resin, four of linseed oil, to be melted together in an iron pot. One part of native oxide of copper, and one of sulphuric acid, are then to be added, after which the composition is ready for use. It is applied hot to the wood with a brush, in the same way as paint, and as before observed, becomes exceedingly hard on drying.

—The works of Mr. Krupp, in Prussia, the largest steel-maker in the world, in 1852 produced 68,000 tons; in 1861 the production was 454,000 tons, and in 1865, the works turned out nearly 2,500,000 tons of steel. This immense establishment contains 350 casting places and muffles, 136 steam-engines, 31 steam-hammers, and other appointments in like proportion.

—It has been somewhat too hastily said that coal is formed directly from wood, and that much of it is found to retain its woody structure. There is great doubt on this point. That wood may be eventually converted into coal is admitted; but in changing, it entirely loses the form of wood—retains no evidence of fiber. It may, under the influence of heat and moisture, be converted into a bituminous mass, which is eventually consolidated into coal; but we can not discover any evidence of wood being transmitted directly to coal. The remains of woody trees found fossil in the coal-meas-

ure strata, may become limestone, may be iron ore—certain it is they are never coal.

—No less than fifteen hundred species of insects live upon the oak; and five hundred live upon them as parasites. Most of the fifteen hundred live upon the leaves, some eat into the wood itself, and others mine in and under the bark.

ELECTRICITY AS A MEANS OF TAKING CORRECT SOUNDINGS IN DEEP WATERS.—In taking deep-sea soundings, the great difficulty is to determine the exact moment at which the lead touches the bottom. It is now proposed that the sounding-line should be a kind of light telegraph cable, which, by means of the electric current, could be made either simply to give warning, by ringing a bell or otherwise, of the lead having touched the bottom, or to put in action an automatic brake, and so prevent any more line passing into the water.

—A new color is reported by the Parisian journals, as produced from coal-tar. It is called *anthine*, and occupies a medium position between the deep purple and the brightest rose-color.

—A portion of the mud brought up from the bed of the Atlantic by the ropes and propels employed to raise the Atlantic cable after it had parted, has been subjected to microscopical examination, and found to be almost the same as the chalk from Dover. It is made up entirely of organisms chiefly in fragments, and has all the appearance of a chalk-bed in process of formation. This is merely an additional proof to an old theory; but as a project is suggested, and will probably be carried out, for compiling a complete list of all the species found in the mud, a considerable interest to science may be made.

—M. Trécul has recently given an account of some observations, showing that plants are sometimes formed within the cells of other plants. In the bark of the elder, and in plants of the stone-crop order, he finds vesicles full of small tetrahedral bodies containing starchy matter, which he has observed to become gradually transformed into minute plants by the elongation of one of their angles.

—Before remelting cast-iron it is often necessary to reduce large masses of it to pieces. The following is a simple and ingenious mode of producing the required fracture: A hole is drilled in the casting for about one-third of its thickness, and filled with water. It is then closed with a steel plug, which is accurately fitted, and the ram of a pile-driver is let fall upon the plug. The first blow separates the casting into two pieces.

—A new island began to rise above the level of the sea in the Bay of Théra (Santorin) in the Grecian Archipelago, on the fourth of February; and, in five days, it attained the height of from one hundred and thirty to one hundred and fifty feet, with a length of upwards of three hundred and fifty feet, and a breadth of one hundred feet. It continues to increase, and consists of a rusty, black, metallic lava, very heavy, and resembling half-smelted scoria which has boiled up from a furnace.

—The supply of emery has, within a short time, been (prospectively) doubled. Hitherto two places—Cape Emery, in the island of Naxos, and the neighborhood of Symrna—have furnished near all the emery used. A few months ago a mine was discovered in North Wales, and another, perhaps the most important deposit of the kind in the world, has just been found near Chester, Massachusetts. This latter yields emery of the finest kind, and which does not rust upon exposure to the air. It is also reported to be capable of doing one-third more work than any other emery in the world. Its non-liability to oxidation also gives it great superiority. This mine is now worked or preparing for work, and instead of "Turkish" emery being the favorite brand, "American" is likely to take its place.

SUBSTITUTE FOR THE MAGNESIUM LIGHT.
—M. Sayers has recently discovered a substitute for the magnesium light, which promises to be of much service to photographers. Twenty-four parts by weight of nitrate of potash, seven parts of flowers of sulphur, and six parts of red sulphide of arsenic, are thoroughly mixed. This composition, when set on fire, affords a most brilliant light, and the negatives produced with it give excellent positives. The contrast between the lights and shades, which, with artificial light, is apt to be very great, may easily be softened down by igniting at once two portions of the mixture; one, the more powerful, to light up the subject, and the other to modify the tones. It has been found that about half a pound of the mixture will afford light for half a minute.

—It has been found that the process by which crystals may be produced on plates of glass, and their designs then etched into that substance, so elaborately studied by Kuhlman, affords beautiful objects for the magic lantern, the difference between the roughened and smooth portions producing on the screen all the distinction between black and white, with every variety of half-tone and gradation.

A VOLCANO IN SOUTHERN BRAZIL.—Captain Richard F. Burton, the English traveler, writes to the *Anglo-Brazilian Times*: I was canoeing down the river of Iguaçu, when, calling on the excellent vicar of Xirica, M. J. Gabriel da Silva Cardoso, and

looking over his parish register, I was struck by the name of a place—Hill that Explodes. On the other side of the river, bearing southwest from the vicarage, rose the Morrow, clothed with trees, an isolated gradual cone, with a distinctly volcanic outline. Its northeastern face is, I was told, a perpendicular rock. The fearful rains of January, 1866, prevented my ascending the Exploding Hill. But the result of many local inquiries was that as lately as fifteen years ago, flame has been seen rising from the hill, and the phenomenon was accompanied by rumblings or explosions which extended across the river to the opposite range of Bananal Pequeno. You will, I hope, hear from me again. Should this report of a dormant volcano in Southern Brazil be confirmed by absolute exploration, the discovery will be of no little value in a geographical point of view. And these lines may perhaps—should I be unable to carry out my project—induce another and a better man to undertake the task. It is not, you will remember, half a century ago, when the scientific of Europe declared that no volcanic formations, and certainly no volcanoes could be found in this magnificent empire.

A SHIP OF THE SECOND CENTURY.—In the course of digging a trench for military purposes, during the late Danish war, the workmen came upon boggy soil, and at a depth of five feet, discovered the remains of a very ancient ship imbedded in the bog. The site is now some distance from the sea (at Wester-Satrup, in Sundewitt Bay); but at the time when it was deserted, it was no doubt "run up" on the beach. It is of oak, but in so very defective a condition, that it had to be strengthened with iron bands before it could be removed to Flensburg, where it may now be seen. The keel is bent upward at both ends, after the fashion of a modern gondola, rising to a height of nine feet ten inches in the bows, and ten feet eleven inches at the stern. The total length is seventy-nine feet ten inches, by a width of eleven feet ten inches in the waist, by a height of four feet two inches. There appears to have been no deck, but several lockers were found, some of which contained bones of animals. Besides this were discovered a number of spears, bows, arrows, battle-axes, wooden clubs, knives, etc.; but, what was more important, some coins were found, which gave the date of the time when this ship floated, not only on the Baltic, but perhaps to the distant shores of Britain. The coins are Roman, and of the second century, A. C.; and there were also bracelets, rings, and other ornaments, besides cooking utensils, etc. All these articles are now in the Archaeological Museum at Copenhagen, but the ship itself the Danes were unable to get away before they had to give place to the advancing Austrians.

—A fossil spider has been found in a shale from the "coal measures" of Upper Silesia. Hitherto spiders have not been found in any rocks older than the Jurassic.

WINDOW FOR THE ILLUMINATION OF A PHOTOGRAPHER'S DARK ROOM.—Obernetter mixes an acid solution of sulphate of quinine with some gum or dextrine, and paints the mixture over a thin sheet of white paper. With this he covers the window panes; and

he states that on the brightest day the window so prepared will allow no actinic light to pass.

—The astronomers have discovered that it is not such a very rare thing for February to be without a full moon after all. The same thing happened in 1847, nineteen years ago; and it is computed that the phenomenon must occur about once in twenty-three years on an average.

MISCELLANY.

—The iron mountain of Missouri is said to be the geographical centre of the United States. It is an almost solid mass of specular iron ore, rising from a level plain two hundred and sixty feet. Its base covers five hundred acres. The ore contains sixty-seven per cent. of iron. It may very appropriately be called the Hub of the Union.

—Nobody likes to be nobody; but everybody is pleased to think himself somebody. And everybody is somebody; but when anybody thinks himself to be somebody, he generally thinks everybody else to be nobody.

—The oldest man in America is probably Jcas Penno, born in Lower Canada, and now living in Kansas City, Missouri. He does not know his exact age, but is at least one hundred and twenty, as he was a man when Montgomery invaded Canada in 1775. He was at that time in the woods splitting rails. For fifty years after the Revolution, he was employed as a trapper beyond the Mississippi. He served under General Jackson, at the battle of New Orleans in 1815. Old as he is, he is in fine health, and busies himself in the care of his house and garden.

—Up to the year 1860, no less than fifty wells had been sunk in the Sahara Desert, by the French. The total quantity of water given by these wells amounts to 7,920,000 gallons per day.

—A ferryman, while plying over a river which was only slightly agitated, was asked by a timid lady in his boat, whether any persons were ever lost in that river. "Oh, no," said he, "we always finds 'em agin the next day."

—Colonies of Swiss are settling in the northern part of Patagonia. The soil is reported as fertile, and well adapted to the raising of cattle.

—When youth made me sanguine, I hoped mankind might be set right. Now, that I am very old, I sit down with this lazy maxim, that unless one could cure men of being fools, it is to no purpose to cure them of any one folly, as it is only making room for some other.—*Horace Walpole.*

—The San Francisco *Mining Press* mentions the discovery at Los Angeles, of oil-springs of a mineral substance, possessing all the qualities of writing-fluid. When first used, the color is a deep, rich black, but after exposure to the air, the color moderates a little, still retaining a good, and to all appearances, durable color.

PATRICK HENRY.—Books are great helps, but there have been great men who were never helped by them. Patrick Henry was no scholar, and read scarcely any thing. On a visit to Jefferson, one fall, he told him that he had been thinking he would read the coming winter, and asked him to lend him a book. Jefferson lent him a volume of Hume's *Essays*. The next spring he carried it back, unread, saying that he had tried to read it two or three times, but could never get through more than a page or so, before falling asleep.

A BULL.—"If a plain reader can enjoy such passages, and at once understand their meaning, he is *one of a thousand who can not*, or who are disgusted with such absurdities of language."—*Extract from a Review of Tuckerman's Essays, in the Round Table, March 10.*

—Enny boddy kan tell whare lightning struck last, but it takes a smart man tew find out whare it iz a going tew strike nex time—this iz one ov the differences between larning and wisdom.

—The new President of Union College is the Rev. Laurens Persens Hickok, D.D., who was born at Danbury, Connecticut, on December 22, 1798; graduated at Union

College in 1820; and devoted himself to theology, first as a preacher in Connecticut, and afterward as a professor in various colleges. In 1852 he was chosen Professor of Mental and Moral Science, and Vice-President of Union College. Dr. Hickok is the author of several religious and scientific works. His election to the presidency of Union College was unanimous.

—The public look upon the editor's labors as the Indian did upon the man who was cutting hay. He gave his opinion that it "was nice to see the white man mow."

—Sir Isaac Newton being asked why he never smoked, replied, "I will not make to myself any necessities."

—Dr. Franklin said that revivals in religion always made him think of a scarcity of grain; those who had enough said nothing about it, while those who were destitute made all the clamor.

—A countryman in Savannah, Ga., observed that a gang of darkeys were working on the streets, each wearing a ball and chain. He asked one of them why that ball was chained to his leg. "To keep people from stealing it," said the darkey; "heap of thieves about here, massa."

—Let a man but stand upright, and he is sure to have the whole earth at his feet.

—Unrighteous gain has destroyed millions, but has never made one man permanently prosperous and happy.

—It seems strange that so small a neck of land as the Isthmus of Panama, and occupying so important a position, should never have been thoroughly explored. But a new discovery has been recently made there, by which the land transit can be reduced to fifteen miles. By taking advantage of the Gulf of St. Blas, on the Atlantic side, and the Gulf of Bayones, on the Pacific, a road can be constructed of fifteen miles length across the isthmus, and the grade, it is said, will be easy, as there is a dip in the mountain chain over which it must be carried.

THE DUKE AND THE BISHOP.—When traveling, the Duke of Roquelaire used a very mean equipage, and dressed in a shabby manner. Passing through Lyons in this guise, he was observed by the bishop of the diocese, who was afflicted with an insatiable desire for news. The bishop, seeing a strange traveler, of mean appearance, thought he had only a plebeian to deal with, and wishing to gratify his ruling passion, cried out, "Hi, hi!" Roquelaire immediately ordered his postillion to stop, and the curious prelate advancing to the carriage, demanded, "Where have you come from?" "Paris." "What is there fresh in Paris?" "Green peas." "But what were the people saying when you

came away?" "Vespers." "Goodness, man! who are you? What are you called?" "Ignorant and uneducated people call me hi! hi! but gentlemen term me the Duke de Roquelaire. Drive on, postillion." The duke passed on, leaving the astonished bishop staring after the carriage.

—"I see villain in your face," said a judge to a prisoner. "May it please your lordship," replied the prisoner, "that is a personal reflection."

—The Duphngberry Debating Society, having dismissed the question, "Where does fire go to, when it goes out?" have got a new and more exciting one—"When a house is destroyed by fire, does it burn up, or does it burn down?" There will probably be a warm debate on this question.

—There was much sense and propriety in the text which an ancient clergyman chose for a wedding sermon. It was taken from the Psalms of David, and read thus: "And let there be peace while the moon endureth."

—A young person once mentioned to Dr. Franklin his surprise that the possession of great riches should be attended with undue solicitude, and instanced a merchant who, in possession of unbounded wealth, was as busy and much more anxious than the most servile clerk in his counting-house. The doctor, in reply, took an apple from the fruit-basket, and presented it to a child, who could scarcely grasp it in his hand. He then gave it a second, which filled the other hand, and choosing a third, remarkable for its size and beauty, he presented that also. The child, after many ineffectual attempts to hold the three apples, dropped the last on the carpet, and burst into tears. "See," said the philosopher, "here is a little man with more riches in the world than he can enjoy."

—An English paper advertises "A piano for sale by a lady about to cross the Channel in an oak case with carved legs."

—The following Internal Revenue Taxes, returned by the principal manufacturers of cabinet organs, harmoniums, melodeons, and similar instruments, for the months of October, November, and December, 1865, are of interest, as showing the amount of business done:

Mason & Hamlin.....	\$6,852.92
George A. Prince & Co.....	2,149.84
S. D. & H. W. Smith.....	2,522.76
Carhart, Needham & Co.....	2,177.16
Estey & Co.....	1,218.18
X. Spang.....	987.12
Taylor & Farley.....	933.07
B. Shoninger Melodeon Co.....	923.66
Peloubet & Son.....	893.14
Jewett & Goodman.....	771.73
Treat & Linsley.....	769.20
Kinnard, Dreher & Co.....	498.73
A. C. Chase.....	436.08
H. R. Phelps.....	343.56